

TQMLS102xA

ARM® Family



HIGHLIGHTS

- ▶ Graphic
- ▶ QorIQ QUICC Engine
- ▶ High speed communication via 3x Gbit Ethernet, 2x PCIe and one USB 3.0 interface
- ▶ Low power consumption (typ. 3 W)
- ▶ ECC protection
- ▶ Cache Coherent Interconnect bus system
- ▶ IEEE 1588 hardware support
- ▶ Security functions

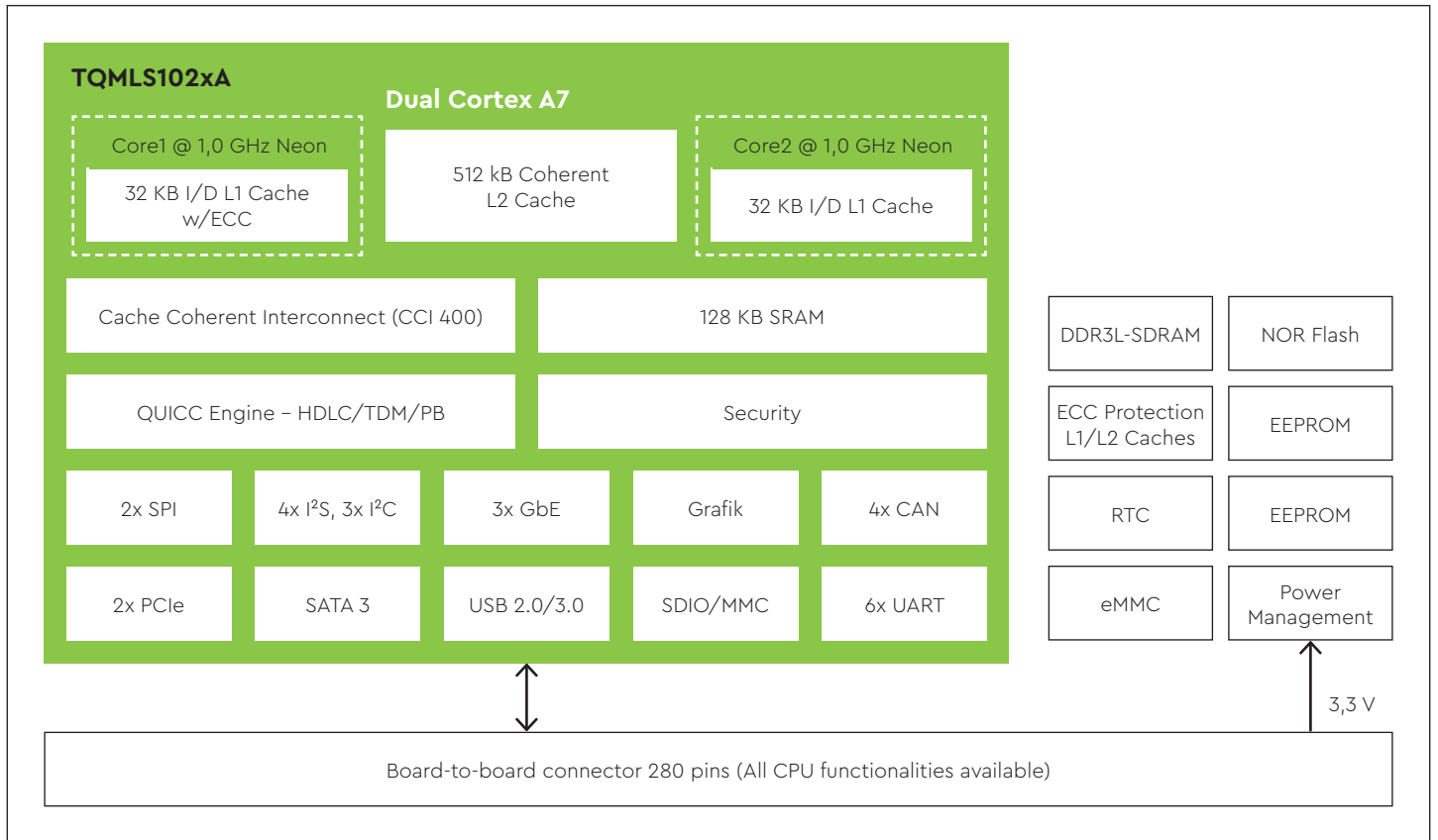
Embedded Dual Cortex A7 module based on LS102xA with high speed interfaces and graphics for many network applications.

TECHNICAL SPECIFICATION

CPU	QorIQ LS1020A, LS1021A, LS1022A
Interfaces	Up to 3x Ethernet 10/100/1000 Mbit (IEEE 1588) Up to 4x FlexCAN Up to 1x USB 2.0 high speed OTG Up to 1x USB 3.0 high speed HOST Up to 6x UART
Periphery interfaces	Up to 1x SDIO/MMC Up to 3x I ² C Up to 2x SPI Up to 4x I ² S Up to 1x SATA 3.0 Up to 2x PCIe SPDIF
Graphic	LCD interface (only LS1021A)
Memory	DDR3L-SDRAM: Up to 2 GB Quad SPI NOR: Up to 512 MB eMMC: Up to 16 GB EEPROM: 0/64-kbit ECC protection (only LS1020A, LS1021A)
Other	Real Time Clock (RTC) Temperature sensor CPU JTAG interface Extended power management (optional) Voltage monitoring (optional)
Power supply	3,3 V

Ambient conditions	Extended temperature range: -40°C...+85°C
Dimensions	55 mm x 44 mm
Plug-in system	Board-to-board plug-in system 280 Pins
Operating systems	Linux
Operating systems on request	VxWorks, QNX

BLOCK DIAGRAM TQMLS102XA



ORDERING INFORMATION

TQMLS1020A-AA	LS1020A, 1 GHz, 64 MB NOR flash, 1 GB DDR3L, 64 kbit EEPROM, RTC, -40°C...+85°C
TQMLS1021A-AA	LS1021A, 1 GHz, 64 MB NOR flash, 1 GB DDR3L, 64 kbit EEPROM, RTC, -40°C...+85°C
TQMLS1020A-AB	LS1020A / 1 GHz, 64MB QSPI NOR Flash, 1GB DDR3L, 64kB EEPROM, RTC, -40°C- +85°C
TQMLS1020A-AC	LS1020A / 1 GHz, 64MB QSPI NOR Flash, 4GB eMMC, 1GB DDR3L, 64kB EEPROM, RTC, -40°C- +85°C
TQMLS1020A-AD	LS1020A / 1 GHz, 64MB QSPI NOR Flash, 8GB eMMC, 1GB DDR3L, ECC, 64kB EEPROM, RTC, -40°C- +85°C
TQMLS1021A-AB	LS1021A / 1 GHz, 64MB QSPI NOR Flash, 1GB DDR3L, ECC, 64kB EEPROM, RTC, -40°C- +85°C
TQMLS1021A-AC	LS1021A + Encryption / 1GHz, 64MB QSPI NOR Flash, 1GB DDR3L, 64kB EEPROM, RTC, -40°C- +85°C
TQMLS1021A-AD	LS1021A / 1GHz, 64MB QSPI NOR Flash, 4GB eMMC, 1GB DDR3L, 64kB EEPROM, RTC, -40°C- +85°C

Other configurations on request

STKLS102xA-AA	STKLS102xA (Eval Kit) with TQMLS102xA-AA, Dual Cortex A7/1 GHz (600 MHz), 1 GB DDR3L, 256 MB NOR flash, 64 kbit EEPROM, 1x RS232, 1x RS485, 2x CAN 2.0 B separated, 3x USB 3.0 HOST, 1x USB 2.0 OTG, 2x ETH 10/100/1000, LCD Port, 1x HDMI, LVDS, 2x PCIe, RTC, Temperature sensor, Reset button, SD interface, Power Supply, 4 GB SD card, Cable
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Starterkit STKLS102xA set
 The core of the STKLS102xA set is the TQMLS102xA module with a Dual Cortex A7 CPU from NXP. The components contained in the starter kit constitute a modular system enabling you to develop your own product ideas. Development of graphic interfaces can be started immediately using the prepared combination of closed display unit and starter kit that are matched to each other. To develop your own hardware you can use the certified and qualified circuit components of the starter kit in your own designs.

TQ-Systems GmbH
 Mühlstraße 2 | Gut Delling | 82229 Seefeld | Germany
 Tel.: +49 8153 9308-0 | info@tq-group.com | tq-group.com

tq-embedded.com